Project Title and Project Purpose Statement

This project seeks to address soil safety in Baltimore City, Maryland through education and hands-on training to residents engaged in edible gardening. The Parks & People Foundation (P&P) will utilize its Community Greening Resource Network (CGRN) to reach out to residents gardening in vacant lots and provide educational opportunities and use the Building Resources and Nurturing Community Health and Environmental Stewardship (BRANCHES) program to train youth in soil safety procedures and bring soil safety services to residents in underserved areas of the city. With an influx of community gardening happening on vacant lots in the city, soil safety is paramount. Once a major industrial city, many Baltimore City vacant lot soils have high levels of lead, arsenic, cadmium, and more. Basic research and informational guides have been published by the Johns Hopkins School of Public Health and the Baltimore City Office of Sustainability, and the information now needs to reach grassroots environmental stewards. This project strengthens City and State efforts to revitalize vacant lots and improve stormwater management, water quality, and climate resiliency through greening. This project will educate over 2,000 city residents engaged in edible gardening through education, provide in-depth training to 12-15 young adults in soil contamination and remediation, provide 30 soil tests to community gardens, and encourage a broader conversation and awareness to soil safety while gardening to a network of organizations and gardens.

Environmental, Public Health, and Community Climate Resiliency information about the Affected Community

The project will focus on vacant lot sites in neighborhoods in Baltimore City's East and West/Southwest areas. The neighborhoods selected are located in the geographic vicinity of Baltimore's Perkins and Gilmor Homes, two of Baltimore's Public Housing Development locations, focus areas for BRANCHES. The selected locations are high priority areas for many urban environmental initiatives such as TreeBaltimore, Power in Dirt (PID), Growing Green Initiative (GGI), and the Baltimore Ecosystem Study (BES), all of which P&P works with in established and successful partnerships, and which is discussed in the partnership section of this grant. The selected locations present major environmental issues including low tree canopy, high present of vacant buildings and lots, major presence of buildings and asphalt which contributes to a heat island effect, inclusion in food deserts, and part of two of Baltimore City's major urban watersheds which feed into the Chesapeake Bay.

The neighborhoods selected for the East location surrounding Perkins Homes include Greenmount West, Oliver, Broadway East, Berea, McElderry Park, Dunbar-Broadway, Middle East, Milton-Montford, Biddle Street, Madison East-End, Johnston Square, Gay Street and Oldtown. The neighborhoods selected for the West/Southwest location include Sandtown Winchester, Harlem Park, Poppleton, Hollins Market, Pigtown, Union Square, Mount Clare, Franklin Square, Carrollton Ridge, Booth-Boyd, Fayette Street Outreach, Midtown-Edmondson.

The demographics for the above locations and in comparison to Baltimore City as a whole are as follows:

	East Baltimore*	West/Southwest Baltimore**	Baltimore City*
Total Population	45,135	28,214	621,445
White/Caucasian	13%	15%	30%
Black/African American	83%	80%	63%
Hispanic	5%	3%	4%
Asian	1%	2%	3%
Median Household Income	$27,888	$26,131	$41,385
Uses Public Transportation	34%	32%	18%
Unemployed Ages 16-64	N/A	15%	N/A
High School Graduate	36%	N/A	30%
Age 25-64	52%	54%	56%

*Data is from 2009-2013 5-year American Community Survey **Data is from 2010 Census

Once an industrial hub, Baltimore's population has decreased by 34% over 60 years. Currently, the City of Baltimore (BC) owns over 16,000 vacant lots as well as a large inventory of dilapidated properties that will require demolition. The abandoned spaces blight neighborhoods; decrease property values; and, contribute to the prevalence of food deserts, illegal dumping, criminal activity and a sense of hopelessness. The havoc wreaked on the urban lands and waters by increased vacancy creates a critical need for stewardship and restoration. A 2007 study showed Baltimore's tree canopy to be just 20 percent, far smaller than many U.S. cities with comparable land masses. In addition to creating a heat island effect that leads to higher temperatures which typically results in greater energy consumption, deficiencies in an urban tree canopy decrease the positive impact of trees in terms of improving air quality and reducing the flow of storm water entering the Chesapeake Bay. Overwhelming, economically challenged neighborhoods in Baltimore are environmentally distressed. With 20.9% living at or below the poverty level and one in three neighborhoods located within a food desert, Baltimore faces significant hurdles in securing equitable access to affordable, healthy foods and building a tax base to adequately fund open space stewardship.

Baltimore City has many public health and climate resiliency issues to address. In 2013, Baltimore adopted the Disaster Preparedness and Planning Project (DP3) to address "the city's current vulnerability to the impacts of severe hazard events...as an effort to address existing hazards while simultaneously preparing for predicted hazards due to climate change."[1] The DP3 follows on the footsteps of a number of Baltimore plans and initiatives to address urban environmental issues. TreeBaltimore was formed as a partnership of Recreation and Parks and a number of non-profit organizations including P&P to reach the goal of doubling the city's tree canopy from 20% to 40% by 2037. The Food Policy Task Force of 2012 marked an increase in efforts around local food systems, finding that 1 in 5 Baltimore City residents live in food deserts.[2] *Homegrown Baltimore*, adopted in 2013, is Baltimore's urban agriculture plan, addressing plans and steps that will be taken to encourage and assist locally grown produce. Power in Dirt, an initiative launched in 2011, assist community groups and individuals in the adoption and revitalization of city-owned vacant lots. The Growing Green Initiative, launched in mid-2014, is an effort to "use sustainable, innovative and cost-effective practices for stabilizing and holding land for redevelopment, and reusing vacant land to green neighborhoods, reduce stormwater runoff, grow food, and create community spaces that mitigate the negative impacts of vacant properties and set the stage for growing Baltimore."[3]

With Baltimore City utilizing all its resources to move towards a sustainable future, ensuring that it is done in a safe and healthy manner is paramount. The majority of urban farms and community gardens are located on vacant lots, in part because many Baltimore City rowhomes do not have backyard spaces and in part because as communities work to improve their neighborhoods through revitalizing vacant land. Vacant land in Baltimore City is the result of demolished buildings. The majority of deteriorating houses have been in disrepair for an extended period of time, and a large number of them release a large amount of lead into the surrounding soil as they are demolished. Neighborhoods such as those in this project's locations in West/Southwest and East Baltimore are disproportionately affected by this phenomenon, as the highest number of vacant buildings and land are located in these areas.

This project focuses on education and training for safety procedures around greening in Baltimore City soils, which often contain high concentrations of lead and other contaminants. Lead poisoning can be a very serious health problem. As documented in the Agency for Toxic Substances & Disease Registry's *Environmental Health and Medicine: Lead Toxicity,*" children of all races and ethnic origins are at risk of lead toxicity throughout the U.S....lead may cause irreversible neurological damage as well as renal disease, cardiovascular effects, and reproductive toxicity...blood lead levels once considered safe are now considered hazardous, with no known threshold...lead poisoning is a wholly preventable disease."[4] Urban areas are affected in greater concentration than suburban or rural areas because of a concentration of

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[1] http://www.baltimoresustainability.org/disaster-preparedness-and-planning-project
[2] Food Policy Task Force, (2012).
[3] http://www.baltimoresustainability.org/growinggreen
[4] Agency for Toxic Substances and Disease Registry, "Case Studies in Environmental Medicine – Lead Toxicity," August, 2010.

housing and automobile related lead fuel pollution.[5] In fact, the EPA estimates that 23% of privately owned homes in the United States built before 1980 have soils above 400 parts per million (ppm), while <400 ppm is considered safe and requires no action.[6] This figure does not factor in vacant land on which buildings built before 1980 have been demolished. As discussed in the EPA's document *Lead-Safe Yards: Developing and Implementing a Monitoring, Assessment, and Outreach Program for Your Community* "according to the Centers for Disease Control and Prevention (CDC), nearly 1 million children living in the United States in the early 1990s had lead in their blood at levels high enough to be associated with irreversible damage to their health."[7] While lead poisoning may affect anyone, the EPA notes that "poor nutrition, deteriorating housing, lack of access to medical care, and language barriers all contribute to placing poor and minority children at risk for lead poisoning."[8]

A primary contributor to lead exposure is through lead containing paint used in housing prior to the U.S. ban for residential use of paint containing lead. However, a very important contributor to lead exposure is soils containing lead. As the EPA notes, "when lead is deposited in soil from anthropogenic sources, it does not biodegrade or decay and is not rapidly absorbed by plants, so it remains in the soil at elevated levels."[9] When the soil has a pH of great than or equal to 5 and with at least 5% organic matter the atmospheric lead is retained in the upper 2-5 centimeters of undisturbed soil, or in other words, in a majority of urban soils as well as the soil that is utilized most on vacant lots or in residential properties. Particularly in neighborhoods in urban areas where there are large numbers of deteriorating old housing, the soil contains higher levels of lead as a "large portion of this lead-based paint covers building exteriors...contaminates soil as the paint film weathers and reaches the soil in the form of chips and dust."[10]

Exposure to lead from outdoor recreational activities such as those held at in urban parks, community gardens or urban farms on vacant lots, and others, is a significant pathway for contamination. "When children play outdoors, lead-contaminated dirt and dust can get on hands, clothes, toys, and food. Putting these items in the mouth can led to ingestion of lead. Children can also breathe lead dust or lead-contaminated dirt stirred up by the wind or by outdoor play activities."[11] It is important to note that while this quote focuses on children, which have a greater risk from lead exposure, the risk exists for adults, as well. However, and to the point of the importance of this project, a 1996 EPA report which conducted part of its research in Baltimore City, the "Urban Soil Lead Abatement Demonstration Project," concludes that where a significant amount of lead is found in soil, the abatement of that soil will result in a reduction in lead exposure which results in a reduction in blood lead concentrations.[12] A majority of the community gardens and urban farms present on vacant land grow produce for their families, friends, and neighbors, and in the case of urban farms, to be sold at farmers markets for the general public. Many experienced and amateur gardeners and farmers alike are unaware that lead contaminants from soil are primarily carried on the surface of produce and not, as many believe, through uptake from the roots of the plant. Adequate safety procedures, then, may currently be lacking or negligible in the urban gardening community.

It is important as vacant land is repurposed for community use that groups working in the spaces know the health risk of working with soil with high levels of lead and the safety procedures for doing so. Recent efforts by P&P, Baltimore Office of Sustainability and the Johns Hopkins School of Public Health have published helpful information to address people's knowledge of risk and promote important safety measurements to take. In 2012, JHU School of Public Health and CGRN partnered to assess what gardeners know about soil contaminants.[13] The study concluded that while gardeners are aware of some risks, they are unaware of the primary contaminant pathways and safety measurements to abate risk. In addition to this research, the JHU School of Public Health developed a soil safety resource guide which includes information on soil testing and more. The Baltimore City Office of Sustainability published Soil

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[5] Mielke, H.W., "Lead in the Inner Cities," American Scientist, vol. 87, no. 1, Jan/Feb, 1999.
[6] EPA, *Distribution of Soil Lead in the Nation's Housing Stock, 1996.*
[7] "Lead Safe Yards: Developing and Implementing a Monitoring, Assessment, and Outreach Program for Your Community", EPA EMPACT, EPA/625/r-00/012, January 2001.
[8] Agency for Toxic Substances and Disease Registry, "Case Studies in Environmental Medicine – Lead Toxicity," August, 2010.
[9] ""
[10] ""
[11] ""
[12] "Urban Soil Lead Abatement Demonstration Project," EPA 600/AP-93/001c, July 1993.
[13] Urban Community Gardeners' Knowledge and Perceptions of Soil Contaminant Risks. Brent, F. Kim, Melissa N. Pouslen, et al. 2014.

Safety Standards in 2014 with input from partners.[14] The policy provides an outline for those interested specifically in growing food for human consumption and requirements needed for Baltimore's new zoning code to create a new community garden or urban farm.

It is past time to disseminate the information and educate and train individuals in soil safety risk and health procedure. In September 2014, P&P, through CGRN, held a Soil Safety Forum that included speakers from the EPA Brownfields and Land Revitalization Department, Baltimore City Office of Sustainability and JHU School of Public Health. The Forum was well attended and showed a great interest in the community for more information and training to be made available. A video of the Forum is available for the public to view online.[15] The information and skills to be taught through this project are necessary now and will empower residents engaged in transforming their neighborhoods to do so in a safe way. Those taught will become ambassadors for their neighborhoods in future soil safety ventures. To date, efforts have been focused on collecting information about risk, procedure, and statistics. Encouragement for gardens to conduct soil tests has been taking place, however, follow-up education and training on what to do with soil test results is minimal across the board. This project aims to remedy the missing education and training on soil safety procedures and remediation, creating stewards and champions of soil safety that will have a cumulative effect throughout the greening community. CGRN, with is network of close to 150 gardens comprised of upwards of 2,000 gardeners, will provide workshops and forums to directly teach about soil safety and soil remediation or safety procedures in the case of high contamination. The CGRN Coordinator will train 12-15 BRANCHES young adults in how to collect soil for soil tests, how to analyze the returned results, and finally what actions to take based on the soil test results. The BRANCHES teams that will become the central students and subsequent champions of soil safety for P&P will be able to take their new skills both to their own communities at Baltimore City East and West/Southwest Public Housing Developments, as well as into future professions. Together, the CGRN Coordinator and the BRANCHES trainees will provide hands-on training, providing 30 free soil tests, 15 each in East and West/Southwest Baltimore respectively. Up to six demonstration sites will be selected from these newly tested gardens and hands-on training provided to any Baltimore City resident who gardens will prepare and educate on various soil remediation techniques or other procedures, such as building raised beds.

Organization's Historical Connection to Affected Community

The Parks & People Foundation (P&P) supports a wide range of recreational and educational opportunities; creates and sustains beautiful and lively parks; and promotes a healthy natural environment for Baltimore. Since 1984, P&P has raised and invested over $70 million in parks, recreation and environmental programs, impacting the lives of tens of thousands of citizens. P&P's 23 regular staff members and 450 seasonal employees provide critical assistance and leadership to strengthen the physical and social fabric of neighborhoods. P&P revitalizes neighborhoods through a dual approach:

- Great Parks, Clean Streams & Green Communities (Great Parks) improves the physical, social and environmental quality of neighborhoods through greening activities and forming networks among communities to sustain natural resources.
- Motivating Youth nurtures children and support communities by working together to provide enriching activities for youth such as group sports, summer camps, after-school programs and environmental education.

P&P organizes communities and develops leaders to address environmental and quality of life issues in Baltimore. Understanding that no single organization can address the multitude of overlapping ecological and societal issues faced by Baltimoreans, P&P builds capacity on a neighborhood level through community organizing and provides connections and guidance to other organizations in order to foster leadership and affect broad change. Many local environmental organizations and coalitions have been facilitated through P&P's efforts, either as a concept devised by or supported by staff or as an idea needing P&P resources and connections in order to develop and thrive. CGRN functions as a grassroots arm of P&P's Great Parks division, engaging and connecting communities to resources that enable them to transform their neighborhoods, one green space at a time. BRANCHES trains and supports young adults to work in their own communities gaining valuable job skills. P&P's synergistic approach to

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[14] The City of Baltimore's Soil Safety Policy for Food Production, 2014.
[15] https://www.youtube.com/watch?v=hldKFTBM9-A&feature=youtu.be

supporting community managed green spaces has successfully buoyed many community groups over the span of the organization's activities.

P&P has been awarded the Seal of Excellence by the Maryland Association of Nonprofit Organizations. P&P has also received the first National Award of Excellence for Community Trees and Urban Forestry by the U.S. Conference of Mayors and the Home Depot Foundation. Other recognitions include awards from the U.S. Forest Service, Maryland State Department of Natural Resources, Mayor & City Council of Baltimore, Alliance for Community Trees, National Arbor Day Foundation, local schools, neighborhood associations and non-profits. In the past five years P&P has established CGRN; expanded the grants program by partnering with the Baltimore City Mayor's Office's Power in Dirt program; doubled tree plantings efforts, and increased enrollment in summer camp programs six-fold.

P&P's CGRN and BRANCHES programs work in the affected communities and have standing relationships with associates and residents in the areas served by this project. CGRN addresses several vital issues that impede Baltimore City's growth and health. CGRN advances the ability of members to support their own projects, empowering them to transform vacant lots from liabilities to assets that provide social and environmental benefits; doubling the urban tree canopy; establishing Baltimore as a leader in sustainable, local food systems; and providing safe, well-maintained public recreational space within ¼ mile of all residents. Operating citywide, CGRN provides knowledge, resources and connections to empower community members to have a great impact through greening, and to develop and support new stewards while connecting to other greeners across the City. CGRN resources are provided for free to members and include access to plant and material giveaways, five neighborhood-based tool libraries, educational workshops, technical assistance, quarterly newsletters, volunteer workdays at member sites and valuable information and connections to other greeners. CGRN resources enable community members to construct and maintain successful gardens or farms of all sizes, models and levels of sophistication.

The demographics of CGRN member neighborhoods demonstrate that resources are allocated to areas in great need. Overwhelmingly, CGRN sites are concentrated in areas with high rates of food insecurity, with 43% of the edible gardens located in areas with a median household income less than $25,000.[16] Residents of neighborhoods with a significant CGRN membership often live well below the poverty level. With each green space that CGRN supports, it increases the environmental literacy of Baltimore City residents and grows green space in environmentally challenged areas. CGRN builds individual and community capacity to produce their own food, revitalize previously vacant spaces, and come together for environmental and community benefit. Through skills trainings, hands-on instruction, the provision of free, essential resources such as plant materials and tools, knowledge and information sharing and connection to a network of individuals with various levels of greening expertise, CGRN increases self-sufficiency by supporting community greeners to better equip green spaces and edible gardens to thrive.

The BRANCHES program trains young adults ages 14-21 in landscape techniques, providing the attention to each trainee to build skills in this unique profession as well as empowering them to become stewards of the environment in their own communities by directly working in and around the neighborhoods in which they live. BRANCHES program of urban ecosystem restoration and young adult job training and employment which has the following goals:

- Encourage coordinated long-term strategies for developing pathways out of poverty for Baltimore City youth living in and around public housing residents focused on the acquisition of skills needed for the emerging green economy in community development activities which are consistent with local planning efforts and capital improvements programming.
- Improve soil and site conditions and plant additional trees and other woody plants to increase tree canopy and storm water management on federal public housing sites.
- Support the revitalization of deteriorated or declining residential neighborhoods through comprehensive neighborhood greening improvement efforts which address blight, as well as housing and public facility needs.
- Assist communities in and around public housing sites to provide appropriate, affordable, and long-term solutions to serious deficiencies in access to employment and fresh and affordable food.

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[16] Baltimore Neighborhood Indicators Alliance. 2000

- Create a model food/vegetable gardening program that can be transferred to other public housing communities.
- Improve health by incorporating nutritional education and healthy snack and meals for the afterschool and summer programs.
- Provide intergenerational community service, environmental stewardship and education opportunities for residents of public housing communities.

BRANCHES engages low-income Baltimore City youth age 14-21 in and around Housing Authority of Baltimore City property in activities which enhance the quality of life for public housing residents of Baltimore City. BRANCHES provides training and healthy living activities in afterschool and summer programming settings, creating future environmental stewards and empowering the youth to make a difference in their own communities. The youth employment and public service activities will improve their local communities through landscaping and natural resources management and restoration and community outreach and education; and increase their future employment prospects through on the job training in urban agriculture and farming, storm water and erosion management, landscaping and garden planning and installation. Parks & People staff provide training, supervise and guide the work to be undertaken on two Public Housing Developments at Perkins Homes and Gilmor Homes, Baltimore, Maryland and the neighborhoods surrounding these sites. The program engages public housing residents and residents in and around the area in improving the physical, social and environmental condition of their communities by integrating green jobs career awareness, training, and employment for youth with creating sustainable locally grown food and building strong and healthy children and adults through nutrition education and outside recreation at local community gardens and local parks and greenways.

Project Description

i.concise description of the activities the project will undertake during the year to examine and address the environmental and public health issues

This project addresses the environmental and public health issue of lead and other contaminants in soils used for intensive gardening and environmental stewardship purposes. Community gardening and urban agriculture are burgeoning efforts made by neighborhoods in Baltimore City to improve quality of life. Many community gardens and urban farms are located on abandoned land. As noted by the EPA, "a garden on abandoned land can become a new community asset by improving the visual look of a neighborhood and potentially increasing nearby property values. Community gardens provide many benefits, including healthier lifestyles by increasing activity levels, providing fresh produce, growing community pride, and nurturing social interactions and cooperation among people."[17] The reuse of abandoned land provides many important environmental and public health benefits. The environmental benefits of community gardening include biodiversity, stormwater management, and climate resiliency such as addressing the urban heat island effect[18] and air quality issues.[19] The public health benefits of community gardening include but are not limited to reducing carbon footprint, access to healthy foods, mental health benefits, increase in physical activity, reduction in crime, and others.[20]

The presence of lead in soil increases individuals' potential for lead exposure and subsequent lead poisoning. Lead poisoning is a major health risk, and lead is included in Toxic Substances Control Act (TSCA) database. Soon after TSCA was created in 1976, the use of lead based paint was banned in 1978. Although it has been banned, any building built before 1978 most likely contains lead-based paint, unless it was removed or covered up safely. However, in many instances in Baltimore City, due to "white flight" of the 60's and 70's a large number of delinquent and deteriorating houses do contain lead-based paint. As these houses deteriorate and are eventually demolished, any lead-based paint included therein has been deposited into the surrounding soils and atmosphere. With the vacant land resulting from these demolished buildings, the surrounding soils often have high concentrations of lead, above accepted limits

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[17] "Reusing Potentially Contaminated Landscapes: Growing Gardens in Urban Soils," EPA 542-F-10-011, 2011.
[18] The urban heat island effect is noted as an issue in the Baltimore City Disaster Preparedness and Planning Project, 2013.
[19] All environmental benefits of community gardening are included as goals in the Strategies and Actions section of the Baltimore City Disaster Preparedness and Planning Project, 2013.
[20] "Multiple Benefits of Community Gardening," Gardening Matters, Minneapolis, MN, 2012.

for human safety. While Baltimore City wishes to encourage reuse of vacant land for gardens and urban farms, the necessity to teach people best management practices and safety procedures for use of potential lead contaminated soils is paramount. The 2013 Childhood Lead Registry survey noted that 40% of children in Baltimore City with Elevated Blood Lead (EBL) levels lived in homes *other* than pre-1950 residential rental units.[21] As pre-1950s homes have a 95% chance of containing lead-paint, this means that outside of children living in homes likely to contain lead paint the percentage of children with EBL is still dangerously high. While Baltimore City banned the use of lead paint in 1950, well before the Federal ban, the majority of cases of children with EBL in Maryland live in Baltimore City.[22] Lead poisoning directly affects Baltimore City residents, and this project will provide the education and training to empower residents to create safe neighborhoods.

The EPA'S Technical Review Workgroup (TRW) on gardening in lead-contaminated soils provides new information on lead exposure from soils used for intensive gardening purposes.[23] This means that the Soil Screening Levels (SSL) for lead, generally accepted to be safe at <400 ppm, when using soil for intensive gardening purposes should be closer to <100 ppm. If the soil does contain a greater amount, appropriate soil abatement or other practices are necessary. The EPA has produced a number of documents providing insight into best management practices for soil abatement or other exposure mitigation techniques such as building raised beds.[24] The TRW on gardening in lead-contaminated soils also includes recommendations for additional sources on how to deal with specific soil lead concentration levels, which will be used in this project.

The important goals this project seeks to achieve include the following:

- Educate current residential and community gardeners and urban farmers of the risks of soil contaminated lead and the importance of soil testing through CGRN; reach 2,000 residents
- Train the P&P BRANCHES team to conduct soil testing, to analyze soil test results, and to determine necessary subsequent actions based on test results; 12-15 young adults trained in soil testing procedures
- Provide free soil tests utilizing the BRANCHES teams in the targeted outreach areas surrounding East and West/Southwest Baltimore public housing developments; 30 soil tests, 15 in East area, 15 in West/Southwest area
- Assist select demonstration sites in outreach areas through experiential on-site training in soil abatement techniques; up to six demonstration sites will be selected out of the 30 soil tests completed for direct assistance and as sites to teach others in soil abatement and mitigation techniques, such as building raised beds
- Promote current knowledge available through partners on soil safety policy, procedures, and more, through forums, informational sheets, and workshops; the CGRN coordinator collaborates with a network of organizations and agencies that can reach thousands, through social media and other promotional avenues CGRN will spearhead the targeted dissemination of soil safety information

These results will be achieved through a series of educational opportunities, hands-on training, and demonstrations. P&P will utilize program CGRN to design and implement educational opportunities, which will be open to the general public with targeted outreach in East and West/Southwest Baltimore. This project will utilize available information from the EPA, CDC, USDA, and USFS to derive educational workshops and summarized worksheets as well as hands-on training for P&P BRANCHES youth program and CGRN garden members' free workshops. CGRN will provide a number of educational opportunities in the form of a soil safety forum, workshops, and informational sheets about soil risk and safety procedures. The CGRN Coordinator will work in tandem with the BRANCHES Coordinator to provide training for BRANCHES team members on how to conduct soil testing, how to analyze the results, and

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[21] Childhood Blood Lead Surveillance in Maryland, Annual Report, MDE, 2013.

[22] "Lead Poisoning Statistics Hold Steady, State Plans New Efforts," Baltimore Sun, September 28, 2014.

[23] While "intensive gardening practices" is not defined in this document, activities that are mentioned include community and home gardening and in particular edible gardening. "Technical Review Workgroup Recommendations Regarding Gardening and Reducing Exposure to Lead-Contaminate Soils," EPA, OSWER 9200.2-142, December 2013.

[24] For example, "Reusing Potentially Contaminated Landscapes: Growing Gardens in Urban Soils," EPA 542-F-10-011, 2011.

best management practices based upon analysis. The BRANCHES team members will then prepare their own training opportunities in East and West/Southwest Baltimore, including all information and skills they have gained. Finally, CGRN will identify demonstration sites in community gardens or urban farms in target areas East and West/Southwest Baltimore neighborhoods to do sample soil tests, conducted by the BRANCHES teams. The soil test results will be used in hands-on training opportunities, available to the public but with targeted outreach to their surrounding neighborhoods, on subsequent soil abatement or mitigation best management practices based upon the soil lead concentration on site. These activities will greatly increase the knowledge of soil risk and soil safety procedures in Baltimore City, empowering residents to take ownership of their neighborhoods through safe revitalization of the vacant land in their areas and to resolve an environmental and health issue that has affected many Baltimore City residents.

The activities of this project directly address and seek to ameliorate conditions outlined in the Federal Environmental Statute Toxic Substances Control Act (TSCA), Section 10(a) which promotes the research, education, and training on toxic substances. This project focuses on the toxic substance of lead, currently located in large quantities in Baltimore City soils. These same soils are used for urban agriculture, community gardening, environmental education, and community forestry. While Baltimore City works hard to encourage and support communities that wish to engage in such environmental stewardship programs and activities, the necessity to educate and train on how to engage safely with Baltimore City soils is paramount and is directly linked to TSCA. The outcome of this project seeks to create a culture of change in edible gardeners in Baltimore City that understands the risks of soil contamination and the necessary procedures to mitigate that risk.

ii. concise description of how the organization and its partners will work together during the year to address the local issues

Partnerships with Baltimore City Recreation & Parks, Baltimore City Office of Sustainability, Johns Hopkins University School of Public Health and Baltimore City Department of Housing will all contribute to the success of this project. The Parks & People Foundation already has longstanding and successful partnerships with all of the above partners and has worked with them on many collaborative efforts over time. The Baltimore City Office of Sustainability, along with inter-agency program the Growing Green Initiative (GGI), will assist in outreach and promotion of the educational opportunities and in the selection of free soil testing and demonstration sites in East and West/Southwest Baltimore. Baltimore City Recreation & Parks, through program TreeBaltimore, will assist in providing materials such as woodchips and trees for demonstration site work. The Johns Hopkins University School of Public Health will assist in developing the soil safety education. The Baltimore City Department of Housing is the agency that provides leases for community groups to work on vacant land, and they will assist in ensuring that all demonstration sites are available for use.

Organizational Capacity and Programmatic Capability

P&P has a long and successful track record of managing projects, programs and partnerships that support community-led greening efforts in Baltimore. For instance, P&P has nearly completed of a $12 million capital campaign to restore a 9 acre portion of Druid Hill Park and build a new LEED Platinum building in the space to serve as P&P's headquarters, while significantly expanding its programs to add a green infrastructure team that is managing $8 million in projects; growing its community forestry program to triple the trees planted annually and adding new community grants programs. P&P has been awarded the Seal of Excellence by the Maryland Association of Nonprofit Organizations. P&P has also received the first National Award of Excellence for Community Trees and Urban Forestry by the U.S. Conference of Mayors and the Home Depot Foundation. Other recognitions include awards from the U.S. Forest Service, Maryland State Department of Natural Resources, Mayor & City Council of Baltimore, Alliance for Community Trees, National Arbor Day Foundation, local schools, neighborhood associations and non-profits.

P&P has a three person administrative management team and two person finance department to support staff and manage operations and grant management. CGRN is staffed by a full-time coordinator, and supported by an active Advisory Committee and partner network. The CGRN Coordinator has held the positon for two years, and previously served as Baltimore's first Power in Dirt Coordinator. CGRN is one of several community greening programs within P&P's Great Parks division. These programs are managed by and Assistant Director who has worked for P&P for three years. She has a MPA and 12 years of nonprofit management experience. BRANCHES is managed by a Green Career Programs

Coordinator who has held the position for six years and successfully grown the program. The Great Parks division is managed by a Senior Director who has worked for P&P for 18 years.

The actions to be undertaken through this project were selected as a priority initiative for CGRN to promote soil safety in Baltimore. Several partners have committed to help promote the program. BRANCHES continually seeks opportunities to teach team members new skills, making the project a strong match. BRANCHES teams' staff time is covered by grants that permit them to undertake new projects within the scope of the program mission. By using youth teams to assist green space stewards in soil collection and hands-on projects, the teams will learn valuable skills and help spread work between multiple P&P programs. Community stewards will ensure the longer-term sustainability of projects, which eliminates the need for P&P project maintenance. Once trainings are developed, the need for staff and funding will be limited to promotions and delivering training sessions, making the program one that can easily fit into existing staff roles.

Qualifications of the Project Manager

Project Manager Anna Evans-Goldstein has worked in Baltimore City in community greening programs and initiatives for three years. She worked as a Power in Dirt Coordinator in one of the geographic locations served by this project in West/Southwest Baltimore as an Americorps VISTA for a year. She worked very closely with community groups and organizations in the area to help revitalize vacant lots into green spaces. Since 2012 she has served as the CGRN Coordinator, providing educational and material support to over a hundred community and family green spaces across Baltimore City. She works directly with many organizations, research institutions, and municipal agencies to bring direct support to grassroots greening efforts in Baltimore. Her resume is attached.

Past Performance in Reporting on Outputs and Outcomes

Timely reporting on all grants, direct and continual communication on all outputs and outcomes.

1. National Fish and Wildlife Foundation
External AGC #: 1302.12.035078
1/1/2013 - 5/30/2015
$40,000

2. U.S. Department of Agriculture, National Institute of Food and Agriculture
External AGC #: 2011-34103-30754, Z544502
9/1/2011 – 8/31/2014
$2,000

3. U.S. Department of the Interior, National Parks Service
External AGC #: P14AC00708; CA-P12AC30
7/10/2014 – 12/31/2014
$237,347

4. U.S. Department of Agriculture Forest Service, Northeaster Area State
External AGC #: 13-DG-11420004-220
8/26/2013 – 9/15/2015
$203,290

5. U.S. Department of the Interior, National Parks Service
External AGC #: PR R4250120049
6/15/2012 – 10/31/2013

Quality Assurance Project Plan Information

This project will involve the use of existing environmental data.